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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Kazuhiro Oki

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EXAMINER

PADGETT, MARIANNE L

ART UNIT

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/809,501	<b>Applicant(s)</b> OKI ET AL.	
	<b>Examiner</b> MARIANNE L. PADGETT	<b>Art Unit</b> 1792	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 18 June 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 48-52 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 48-52 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

Art Unit: 1792

1. A **Request for Continued Examination** under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's **submission filed on 6/18/2009** has been entered.

Applicants have canceled all previous claims & provided a new set directed to vapor condensation and collection, where applicants' new set of claims have minor overlap with the claims previously examined, enough so that they can marginally be considered responsive to the preceding actions.

2. **Claims 48-52** are rejected under 35 U.S.C. **112, second** paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Independent **claim 48's** preamble states "method for drying a coating layer...", however there are no limitations in the body of the claim directed to causing any drying to occur, hence the body of the claim is not commensurate in scope with the preamble, such that it is uncertain whether drying is actually intended to be required or not.

In lines 4-5 of **claim 48**, the requirement of "a condensing mechanism **disposed on** a coating side of said moving web" (emphasis added) is ambiguously worded, since "disposed on" may mean that the condensing mechanism is required to be placed onto the side of the web which is to be coated or is coated (ambiguous as to whether coating has actually occurred), or the phrasing could more generally mean that the condensing mechanism is somewhere facing a site of the web that is to be coated or has already been coated. In other words as written, both the state of the web with respect coating & the location of the condensing mechanism are uncertain.

Art Unit: 1792

With respect to new **claim 50**, how one reads the requirement of "a thermo-insulating member is disposed between said condensing mechanism and said recovery mechanism" in light of the specification is unclear, as the specification only discusses the use of "gutters", no generic "recovery mechanism", where the gutters as illustrated in figure 3, ref. #43c or figure 6, ref. #73b, are connected directly to the condenser mechanism (43 or 73, respectively), with nothing in between them that could be called an insulator & with the disclosure in the paragraph bridging pages 18-19 not providing any statement of where the thermo-insulating member is placed for preventing condensation on the gutter, but also not providing any indication that the location would or could be "between". To place insulating material between the only disclosed recovery mechanism (gutter) & the condenser would prevent the recovery mechanism from performing its function, thus it is unclear in light of the specification how the process of this method limitation is supposed work.

With respect to new **claim 51**, the requirement of "said condensing mechanism is disposed so as **to confront** said coating layer" (emphasis added), while clarifying the issue of whether or not a coating layer is present, does not clarify whether or not the condensing mechanism is placed onto the web or coating layer, especially considering that the use of "to confront" is somewhat nonidiomatic, as this word is generally used to describe *social* situations, i.e. meaning (1) to face, especially in challenge (opposed); (2) to cause to meet, or bring face-to-face, or to meet face-to-face (encounter).

3. **Claims 48-52** are rejected under 35 U.S.C. **112, first** paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

**Claims 48-52** are rejected under 35 U.S.C. **112, first** paragraph, because the specification, while **being enabling** for a gutter directly attached to a vapor condenser's structures for liquid collection or runoff areas as illustrated in figures 3 or 6, where the vapor condenser & gutter are

Art Unit: 1792

employed in an enclosed drying mechanism, does not reasonably provide enablement for the class of all mechanisms used to recover condensed vapor from the class of all possible types of condensing mechanisms, employed in almost unlimited situations. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to use the invention commensurate in scope with these claims.

Review of the present application & computer search of the application's PGPub found no general disclosure of a solvent recovery mechanism, and only found disclosure of condensers plus gutters in the paragraph cited by applicants on pages 16 & 18-19 ((e.g. [0048] & [0054] in PGPub), plus in the paragraph bridging pages 22-23 ([0066]), with no disclosure or hint of using any other type of structure, thus the new claims as written are **broader in scope than the original disclosure**, thus constitute **New Matter**. In both examples, the condenser/gutter constructions are disclosed in the context & setting of an enclosed space with the dryer causing evaporation from a coated continuous substrate. It is noted that the original claims 9-13 that most closely related to the newly presented claims, were directed to a single device for condensing & recovering organic solvent in a particular position within the drying device then claimed, with no disclosure of a separate mechanism for recovering solvent.

Also as discussed above, the original disclosure particularly lacks support, discussion of or enablement for placing "a thermo-insulating member... disposed between said condensing mechanism and said recovery mechanism", hence for reasons already stated above in section 2, the limitation of **claim 50** additionally must be considered to be **New Matter**.

4. **Claim 50** is rejected under 35 U.S.C. **112, first** paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Art Unit: 1792

The limitation of new **claim 50**, also lacks appropriate enablement for how one would employ the claimed thermo-insulating member between the claimed condensing mechanism & the claimed recovery mechanism for condensed vapor, as the specification does not discuss the claimed position, appear to illustrate the claimed thermal insulating member which could disclose a location therefore, and the apparently claimed position for the insulating member would appear to contradict or interfere with the function of the claimed recovery mechanism, especially in light of the only discussed or disclosed "recovery mechanism" being a gutter, which would appear to be blocked by putting a thermal insulation member between gutter & the condensing mechanism from which the gutter must collect/recover condensed liquid. While the specification does not appear to say where to place the claimed thermal insulating member, the examiner would consider it useful to put insulating material around structures on the gutter, such as on the gutter underside of where the collected liquid solvent is running off above it & consequently cooling the gutter structure, so as to prevent condensation on the underside of the gutter that could drip into the dryer enclosure, however there is NO support found in the specification for doing such a procedure or any other particular location or configuration.

Note that due to the lack of clear enablement for the configuration of claim 50, a clear or meaningful prior art rejection with respect to this uncertain feature does not appear possible/likely.

5. The following is a quotation of the appropriate paragraphs of **35 U.S.C. 102** that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of **35 U.S.C. 103(a)** which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

Art Unit: 1792

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary.

Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. **Claims 48-49 & 51-52** are rejected under 35 U.S.C. **102(b)** as being clearly anticipated by **Surprenant** (3,539,205).

**Surprenant** (abstract; figures; col. 1, lines 3-7, 22-31, 46-71+; col. 2, lines 20-col. 3, esp. col. 2, line 61-col. 3, lines 9 & 55-75; col. 4, lines 5-55, esp. 46-55) teaches a method & means for treating continuous fabric, sheet, web or film substrates with a finishing agent or an impregnation agent, which is dissolved or suspended in a volatile organic solvent, where this solution may be applied to the substrate immediately before entering a drying chamber or within the drying chamber. Among taught drying means that may be employed are heated guide rollers as in figures 1 or 2, or IR heat lamps as in figure 3, which are also taught to possibly cause curing. **Surprenant** (3,539,205) teaches several alternative mechanisms for solvent condensation & recovery, however the one of figure 2 is particularly relevant to the claims as presented, as cooling coil 34 reads on the taught condensing mechanism, where as illustrated the condensed solvents flow by dripping into "sump 35" that is heated by heating coils 36, where it is noted that as illustrated the wall of housing 30 connects the cooling coil in the sump trough, where the condensed liquid collects & is heated. In col. 4, lines 46-55, **Surprenant** particularly notes that the condensate drops from the condensing coils into the heated sump from which it is withdrawn & transferred to storage for reuse in making fresh treating solution which is applied to the treating zone.

Art Unit: 1792

Note that the atmosphere between the coil & the collection trough may be considered to provide a degree of thermal insulation between these features. It is also noted that as in this particular illustration, the immersion coating process means that all sides of the substrate are coated, noting col. 3, lines 55-60 also explicitly indicate both sides may be coated, so the illustrated cooling coil may be considered to be facing or "confronting" a coated side of the substrate, which reads on possible meanings of the claim language.

7. **Claim 50** is rejected under 35 U.S.C. **103(a)** as being unpatentable over **Surprenant** (3,539,205) as applied to claims 48-49 & 51-52 above, and further in view of **Figiel** (4,753,735).

**Surprenant** (3,539,205) does not provide any teachings discussing a "thermo-insulating member", or a location therefore that is between their solvent condensing mechanism & their solvent recovery mechanism, however neither does applicants' original specification provide any such location, only generally mentioning the desirability of using insulation, such that it is unclear in light of the specification how the claimed insulation is intended to be physically employed, but **Figiel** (abstract; figure 1; col. 3, lines 44-68+; & col. 4, line 48-col. 5, line 16, esp. lines 5-7 for insulation teachings), who is teaching a relevant technique for solvent condensation & recovery using elevated temperatures in vapor zones to immerse & dry articles, then condensing mechanisms that include cooling jackets combined with condensing troughs, where as indicated for vessel 29, use of insulation 67 is taught for use to maintain efficiency & conserve energy, where as illustrated the insulation surrounds the condensing structure & vapor space, with condensation trough 32 extending therefrom (32') in order to deliver condensed solvents to a subsequent collection point (i.e. a gutter extends from the overall condensation mechanism). It would've been obvious to one of ordinary skill & competence in the art, when considering the teachings of **Surprenant**, with respect to solvent condensation & recovery to employ the suggestion of Figiel with respect to use of insulation for maintaining efficiency & energy conservation in the processes of Surprenant, as the primary reference specifically teach temperature differentials between their condensation mechanisms & other locations in their process chamber, inclusive of solvent collection sites,



Art Unit: 1792

hence in the interest of requiring less energy to maintain the taught temperature differentials (thus lower costs for energy), it would've been obvious to one of ordinary skill in the art to construct the claimed apparatus of the primary reference employing materials that would provide such thermal insulation between the cooled wall & cooling coil structures of the condensation mechanisms, and the heated structures employed for the solvent reservoirs/collectors & vaporization/drying constructions, such as sections of the housing wall (ref #10 or 30, etc.) between condensation mechanism & solvent collection site, or on the underside of collection trough's 15 or 55, in order to minimize the cooling or the heating requirements of one section, so as to use less energy input to maintain the desired temperature in the other section of the apparatus, as such a concept was shown to be old and well-known by the teachings of Figiel & would have been reasonably expected of a competent engineer in order to minimize costs (& pollution).

8. **Other art** of interest to the same assignee as the present application includes: **Washizu et al.** (2006/0275579 A1, 2006/0270802 A1 & 2006/0266463 A1) & **Sonobe et al.** (7,526,878 B2), who are not prior art & all have a method claims were coatings containing solvents are applied, with vaporization of the solvent, but do not have any limitations in the claims to condensation & recovery thereof.

9. Applicant's arguments filed 6/18/2009 have been fully considered but they are not persuasive.

Applicant's arguments with respect to claims 48-52 have been considered but are moot in view of the new ground(s) of rejection.

With respect to previously applied art, it is noted that **Resnick** (4,694,586) previously cited against now canceled dependent claims concerning condensers & use thereof, while employing a condenser structure that faces coated surfaces of the immersion coated substrate, employs cooling fluid within the condensers structure which is taught to be at room temperature, and which collects in

Art Unit: 1792

collection tray 22 or 46 in figures 1 or 2, with the metal substrate temperature being elevated due to induction heating (abstract; col. 4, lines 20-50; col. 5, lines 30-53), thus Resnick lacks the present claims requirement of the recovery mechanism being at a higher temperature than the condensing mechanism, as the collection tray is employed would reasonably have been expected to be at approximately room temperature, as they are not actively temperature controlled, such that it is probable that they collected at room temperature condensed solvents & heat from the impinging confined vapor would like to cancel.

**Strobush et al.** (5,881,476), as noted in previous actions, has no detailed discussion of condensation/recovery operations for solvents from their dried coatings, only a passing reference in example 4 on col. 21 with respect to control of the partial pressure of the solvent using a condenser loop.

10. **Any inquiry** concerning this communication or earlier communications from the examiner should be directed to **Marianne L. Padgett** whose telephone number is **(571) 272-1425**. The examiner can normally be reached on M-F from about 9:00 a.m. to 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks, can be reached at (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Marianne L. Padgett/  
Primary Examiner, Art Unit 1792

MLP/dictation software

8/27/2009